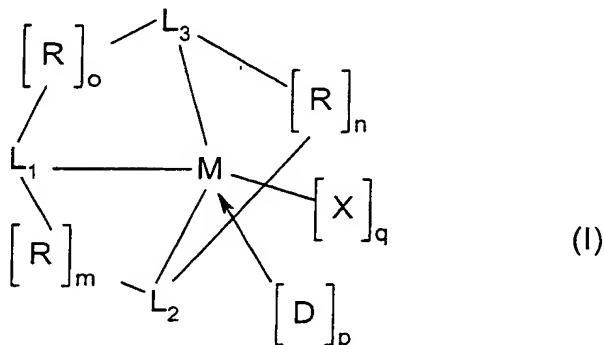


## Abstract

1. The invention concerns olefin polymerization catalyst component comprising an organometallic compound of general formula I



wherein:

**M** is a transition metal of groups 3, 4-10, lanthanide or actinide of the periodic table of the elements; each **R** is independently a structural bridge rigidly connecting two ligands **L**<sub>1</sub>, **L**<sub>2</sub> and **L**<sub>3</sub> and is constituted by 1 to 4 chain atoms selected from carbon, silicon, germanium, oxygen, boron; *m*, *n* and *o* are 0 or 1, with the proviso that *m*+*n*+*o* is 2 or 3; **L**<sub>1</sub> is a ligand of the cyclopentadienyl type or is isolobal to cyclopentadienyl, **L**<sub>2</sub> is a ligand of the cyclopentadienyl type or is isolobal to cyclopentadienyl, or a monovalent anionic ligand selected from the group consisting of N, P, B when *m*+*n*=2, it is selected from the group consisting of NR<sup>1</sup>, PR<sup>1</sup>, BR<sup>1</sup>, O and S when *m*+*n*=1;

**L**<sub>3</sub> is a monovalent anionic ligand selected from the group consisting of N, P, B when *n*+*o*=2, it is selected from the group consisting of NR<sup>1</sup>, PR<sup>1</sup>, BR<sup>1</sup>, O and S when *n*+*o*=1; R<sup>1</sup> is hydrogen, C<sub>1</sub>-C<sub>20</sub> alkyl, C<sub>3</sub>-C<sub>20</sub> cycloalkyl, C<sub>6</sub>-C<sub>20</sub> aryl, C<sub>3</sub>-C<sub>20</sub> alkenyl, optionally comprising 1 to 5 heteroatoms such as Si, N, P, O, F, Cl, Br; each **X** is independently selected from the group consisting of hydrogen, halogen, NR<sup>2</sup>, R<sup>2</sup> with R<sup>2</sup> equal to C<sub>1</sub>-C<sub>20</sub> alkyl, C<sub>1</sub>-C<sub>20</sub> alkyl, C<sub>3</sub>-C<sub>20</sub> cycloalkyl, C<sub>6</sub>-C<sub>20</sub> aryl, C<sub>3</sub>-C<sub>20</sub> alkenyl, optionally comprising 1 to 5 heteroatoms such as Si, N, P, O, F, Cl, Br; *q* is a number whose value is: 0, 1, 2 or 3, depending on the valence of the metal **M**; **D** is a neutral Lewis base, *p* is a number whose value is: 0, 1, 2 or 3.

The invention also concerns catalysts comprising compounds of formula (I) and the polymerization process making use of a catalyst comprising the claimed compounds.